What is claimed is:

1. A disk cartridge comprising:

a cartridge housing in which a disk compartment is formed between an upper shell and a middle shell or between said middle shell and a lower shell by overlapping said upper shell, said middle shell and said lower shell and in which said middle shell is rotatably supported by said upper shell and said lower shell;

a disk-like recording medium stored within said disk compartment so as to become freely rotatable;

a pair of shutter members attached to said middle shell in such a manner that they can be moved in the flat surface direction on the same plane; and

a shutter opening and closing mechanism for opening and closing an opening portion by moving said pair of shutter members based on the rotation of said middle shell.

2. A disk cartridge according to claim 1, wherein said pair of shutter members are comprised of a combination of two substantially semicircular same plate materials and said shutter members are symmetrically disposed on one surface side of said middle shell across said opening portion.

3. A disk cartridge according to claim 1, wherein said shutter opening and closing mechanism includes rotary coupling portions respectively provided on one side portions of said pair of shutter members and which are coupled to said middle

shell so as to become freely rotatable and movement coupling portions respectively provided on the other side portions of said respective shutter members and which are coupled to said lower shell or said upper shell so as to become movable relatively and said shutter opening and closing mechanism opens and closes said opening portion by rotating said pair of shutter members around said rotary coupling members based on the rotation of said middle shell to thereby relatively move said movement coupling portions.

4. A disk cartridge according to claim 3, wherein said rotary coupling portion is comprised of a combination of a shaft portion provided on one of said pair of shutter members and said middle shell and an engagement hole provided on the other of said pair of shutter members and said middle shell, said movement coupling portion is comprised of a combination of a guide groove provided on one of said pair of shutter members and said lower shell or said upper shell and an operation convex portion provided on the other of said pair of shutter members and said lower shell or said upper shell and said pair of shutter members are enabled to execute said open and close operation of said opening portion by moving said guide groove along said operation convex portion based on the rotation of said middle shell.

5. A disk cartridge according to claim 1, wherein said opening portion is extended in the linear direction through

respective central portions of said middle shell and said lower shell or said middle shell and said upper shell.

6. A disk cartridge according to claim 1, wherein an elevation mechanism for moving said middle shell in the direction perpendicular to said rotation direction based on the rotation of said middle shell so that said middle shell is pressed against said lower shell or said upper shell.

7. A disk cartridge according to claim 6, wherein said shutter opening and closing mechanism includes a pair of guide grooves provided on one of said pair of shutter members and said cartridge housing and a pair of operation convex portions provided on the other of said pair of shutter members and said cartridge housing and which are slidably engaged with said guide grooves, and said pair of shutter members are enabled to open and close said opening portion by moving said guide grooves along said operation convex portions based on the rotation of said middle shell.

8. A disk cartridge according to claim 6, wherein said pair of shutter members are comprised of a combination of a pair of substantially semicircular same plate-like materials, said pair of shutter members are symmetrically disposed on one surface side of said middle shell across said opening portion, said guide grooves are provided on one side portions of chord sides of said respective shutter members and pivots provided

on the other side portions of said chord sides are supported by said middle shell so as to become freely rotatable.

9. A disk cartridge according to claim 6, wherein said elevation mechanism is comprised of a plurality of circular-arc-like cam grooves or cam convex portions provided in the circumferential direction of said upper shell or said lower shell at a predetermined interval and which are concaved or convexed in said direction in which said upper shell, said middle shell and said lower shell are overlapped and cam convex portions or cam grooves provided in the circumferential direction of said middle shell at a predetermined interval and which are slidably engaged with said cam grooves or said cam convex portions.

10. A disk cartridge according to claim 1, wherein a gear portion is provided on the outer peripheral surface of said middle shell over a predetermined range of the circumferential direction and an opening window from which a part of said gear portion is exposed is bored through the side surface of said upper shell and said lower shell.

11. A disk cartridge according to claim 10, wherein said pair of shutter members are comprised of a combination of a pair of substantially semicircular same plate materials, said pair of shutter members are symmetrically disposed on one surface of said middle shell across an opening portion, said

guide groove is provided on one side portion of a chord side in each of said shutter members and a shaft portion provided on the other side portion of said chord side is rotatably supported by said middle shell.

12. A disk cartridge according to claim 11, wherein a pair of guide grooves are provided on one of said pair of shutter members and said cartridge housing, a pair of operation convex portions which are slidably engaged with said guide grooves are provided on the other of said pair of shutter members and said cartridge housing, said guide grooves are moved along said operation convex portions based on the rotation of said middle shell, whereby said pair of shutter members are enabled to open and close said opening portion.

13. A disk cartridge according to claim 10, wherein said opening portion is extended in the linear direction through central portions of said middle shell and said lower shell or said middle shell and said upper shell.